

5. Maintaining 1-Hr Ozone Attainment into the Future

“A Regional Commitment to Contingent Responses to address potential Attainment Problems”

Key Points:

- *Demonstrates projected Ozone 1-hour AQ Maintenance through 2012 based on the Projected 2007 and 2012 NO_x and VOC redesignation inventories compared to the Approved Attainment Demonstration*
- *Demonstrates continued commitment to Wisconsin's Air Quality Program [Subpart 1] through the maintenance period reflecting particularly on the monitoring plan, control programs, permitting, inventory, SIP planning and program enforcement aspects*
- *Describes WI maintenance evaluation commitment(s) based on violation (or near-violation concentration trends) during 2003-2004 and 2005-2007 and violation or “above attainment level” emissions during 2008-2012*
- *Describes Contingent Ozone Precursor Emission Control Plan including a list of potential contingent control measures for the post-2007 period*

Introduction to the Maintenance Plan

A major component of the Redesignation Request for 1-hour Ozone Attainment Status is a “Maintenance Plan” that ensures the areas redesignated will remain in attainment into the future. This chapter describes the multiple components of that Plan.

A Maintenance Plan does not guarantee that the air quality standards will *not* be violated, only that the emissions control programs that led to attainment level air quality remain effective going forward. The Plan has to ensure that projected emission inventories will not exceed attainment levels (both real and modeled) and that all the air quality management mechanisms that led to attainment will remain active. In particular, this includes the monitoring, enforcement, permitting and inventory reporting components.

In addition, a Maintenance Plan needs to provide a planning structure and listing of contingent responses, including potential additional emission control measures that will be pursued if the region appears to be falling back into a potential 1-hour ozone violation setting. During development of the draft May 2002 redesignation requests that addressed the entire Lake Michigan region, Wisconsin worked with Illinois, Indiana, EPA-Region 5 and LADCO to craft a single regional “Contingency Plan”, which would have become part of the individual Maintenance Plans, to address such conditions. That contingent response was built on a relatively rapid regional evaluation structure. An air quality trend suggesting that the region might violate the standard in the near-term would trigger an evaluation.

In redrafting the proposed redesignation request for the Manitowoc Co and Door Co areas and the maintenance plan updates for the Sheboygan Co and Kewaunee Co areas, WI incorporated concerns of stakeholders and the upwind states in refining a

moderated “regional” maintenance approach consistent with the northeastern Wisconsin areas’ air quality maintenance situation. This plan is based on the continued regional effort to attain the standard in the remaining nonattainment areas by 2007. It includes commitments for the post-2007 period ensuring that any renewed violations or excess emissions are addressed with appropriate contingency measures. In the period prior to the regional attainment date, the plan ensures rapid evaluations on a regional basis so that attainment air quality can be ensured going forward.

Projecting 2007 and 2012 AQ Maintenance Consistent with the “2000 Attainment Demonstration for the Year 2007”

- *Synopsis of the Lake Michigan Attainment Demonstration*
- *SIP Linkage to the Lake Michigan Attainment Demonstration – Maintaining Program Integrity through 2007*
- *WI 2007 Redesignation Inventory comparison to the Attainment Demonstration Inventory and Lake Michigan Inventory Projections comparison to the Attainment Demonstration*

2007 Attainment Demonstration

Wisconsin and the rest of the Lake Michigan nonattainment areas in October 2001 received US-EPA’s approval of their composite Lake Michigan Ozone Attainment Demonstration. That attainment demonstration results in 2007 “modeled attainment” based on the projected air quality resulting from specified emission reductions in VOC, NO_x and CO across the region. The emission reductions are a consequence of adopted emission control programs at the state, region and national levels. The modeled air quality improvement is demonstrated for typical ozone episode meteorology crafted from field measurements and monitoring data collected during the 1990s.

Attainment is demonstrated under typical conditions sufficient to meet EPA’s guidance for modeled attainment. EPA approved the three state’s programs based on enforceable adopted programs and discrete commitments to evolving programs at the time (such as the regional NO_x SIP call). Upon adoption, these programs became federally enforceable components of the states’ standing ozone SIPs. Emission reduction components were crafted to address both VOC and regional NO_x control. While earlier portions of the regional reduction effort focused on VOC control almost exclusively for the region, the attainment demonstration shifted much of the evolving reduction effort to NO_x control in the post-2000 period. The effort will lower background concentrations of regional ozone while the VOC controls focused on lowering more local ozone formation and the short episode peak concentrations along the lake shore.

Appendix 5-1 – Synopsis of the Lake Michigan Attainment Demonstration provides a more complete description of the regional demonstration and Wisconsin’s Rate-of-Progress components of that plan.

Attainment Demonstration Program Integrity through the Attainment Year - 2007

The “Maintenance Plan” for the 1-Hour Ozone Standard maintains the AQ integrity of the states’ SIPs going into the future. Because of the recent approvals, which were based on the modeled premise of continued emission reductions through 2007, that year remains a key for assessing the program’s integrity. Modeling is based on “typical”

ozone conditions for the region, not any of the actual days during the 1999-2001 “monitored attainment” period.

The 2007 Attainment Demonstration necessitated a significant and rapid control effort within the states. Had they been able to demonstrate modeled attainment earlier than 2007 within the region, they would have been obligated to implement any reasonable and available programs to facilitate an early attainment objective. The Wisconsin SIP meets progress requirements through 2007 and IL and IN exceeded progress levels of reduction by that time because of regional NO_x reduction requirements necessary to enable attainment in areas further downwind than the Lake Michigan region.

Because of the judicially-delayed large source NO_x control program timelines associated with the NO_x SIP calls, and because of elevated mobile sector emissions under MOBILE 5 compared to MOBILE 6 for the 2000-2007 time-frame, any potential for an earlier showing of modeled attainment demonstration seems unfeasible. EPA in its 2001 approval recognized the need for at least the progress-based reductions through the attainment date. No regional modeling supporting revision to the demonstration has been scheduled or accomplished.

During the development of the May 2002 draft redesignation request, some Wisconsin industrial stakeholders had suggested modification to the Attainment Demonstration SIP to remove some or all of the 2002-2007 NO_x control components from the standing federally-approved SIP. The argument had been to retain the state regulations/standards to ensure the necessary regional emission reduction through 2007, but to rescind the federally-approved SIP elements to preclude federal enforceability¹.

Following the elevated ozone episodes in June 2002 that ended the pending regional redesignation request for all but the Manitowoc and Door areas, concerns regarding continued SIP approvability and changed enforcement posture now appear to be moot. EPA has indicated that they are not in a position to act favorably on a broader area request so the 2007 attainment demonstration plans remain fully in place and any changes to new source review and VOC offset requirements (or any other attainment SIP elements) will only impact Manitowoc and Door counties.

¹ Because of the recently approved and technically grounded modeled attainment demonstration for the Lake Michigan region, EPA had indicated that actions eliminating existing approved SIP components, or making them federally non-enforceable under the SIP, would spur disapproval of the state’s entire attainment demonstration plan. This would have precluded EPA from several considerations including acting favorably on a redesignation request for the Wisconsin areas in question during development of the Draft May 2002 Redesignation Proposal. The expected consequence of EPA not being in a position to act favorably on that broader redesignation request from Wisconsin would have been continuation of the current VOC new source review LAER technology requirement, the VOC offsets requirement and continued smaller major source definition for the current nonattainment areas of the state. Therefore, the draft May 2002 maintenance plan retained all the existing SIP components and only the new source review and permitting components would have “automatically” triggered back to attainment area equivalents. The change occurred based on statutory language once notice of federal redesignation occurs in the federal register and the corresponding state redesignation of the area occurs.

A 10 Year Maintenance Plan – 2002-2012

An additional requirement of the maintenance plan is to show similar program and reductions integrity through 2012 (a ten year window) such that activity growth never results in increased emissions levels from the 2007 target through 2012. In 2010, presuming that the 1-hour ozone standard is still an active ambient air standard, the states are obligated to craft an additional ten year maintenance plan to address the period 2013-2022.

One outcome of the Maintenance Plan is the resetting of transportation conformity budgets for the maintenance period. Because of the 2007 attainment demonstration, that year's budget under the maintenance plan can not exceed the 2007 demonstration levels. In addition, the separate 2012 projection required under the plan sets a second set of budgets that become effective for 2012. These budgets for the 2007 and 2012 milestone years form the basis for both transportation improvement project assessment and the longer term regional transportation plans. Once noticed as adequate for conformity purposes, these budgets replace interim budgets set for the progress milestones of 2002 and 2005 (*for Manitowoc Co*²). Transportation Conformity Budgets are addressed further in Chapter 6.

Projected Inventory Integrity – 2007 Redesignation Vs 2007 Modeled Attainment Demonstration

A relatively simple test for maintenance involves the assurance that the assumed control programs, or program equivalents, of the attainment demonstration remain in place for 2007. Any differences in emissions resulting from changed assumptions need to be explained. Other major differences from inventory-to-inventory comparison for 2007 also need to be explained. The key issue is that the Attainment SIP control program and activity assumptions need to remain predominantly whole going into the maintenance period because that level of control effort was demonstrated necessary to attain the standard.

Figures 5-1a and 5-1b compare the aggregate VOC and NOx emissions from the 2007 Maintenance Inventory and the 2007 Attainment Demonstration Inventory. For comparative purposes, the rate-of-progress summer day inventory is compared to an equivalently crafted summer day maintenance inventory. In this case, the comparison involves the 8 county inventory area involving rate-of-progress reductions in the WI Attainment Demonstration SIP.

Though the allocation of emissions between the point and area categories varies somewhat, reasonable agreement exists between the aggregate progress-limited projected inventory and the re-estimated maintenance inventory for the eight counties. Because of continuously updating inventory estimation techniques, some differences are inevitable and do not reflect different control program assumptions or substantially different regional growth assumptions. Regional data quality assessment comparing the level of modeled ambient precursors to monitored precursor levels shows good agreement for the historic periods in the technical evaluations. Projected 2007

² EPA approved the WI Attainment Demonstration SIP acknowledging that 2002 and 2005 progress budgets might be altered based on MOBILE6 translation from MOBILE5. As long as the effective modeling assumptions remained consistent and control programs affecting the mobile sector remained in place the pre-2007 progress approval and assessments would not be detrimentally impacted by the MOBILE model changes.

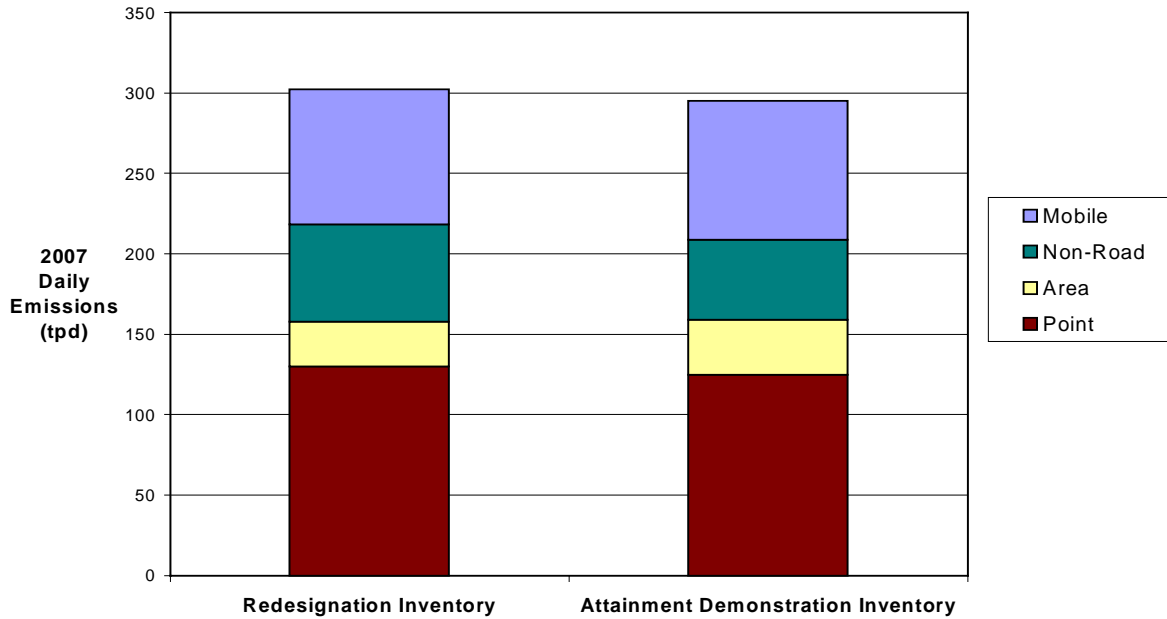
emissions in the modeling demonstration do reflect some difference from the ROP and the current ROP-like redesignation inventories. Again, these differences predominantly reflect a “most-realistic possible” regionally derived modeling inventory-technique compared to the area-specific differences, which were more sensitive to projected reduction creditability issues. Again, the differences do not reflect changes in program or growth assumptions. **Appendix 5-2 – Reconciliation of 2007 Inventories** provides some more specific inventories comparison by sector for the Wisconsin areas.

A similar review effort on a regional 2007 comparison indicates a reasonably consistent projection for 2007 under the maintenance plan compared to the attainment demonstration. Some differences do exist for all three inventories of NO_x and VOC. This in part includes the partial accounting for the impact of the newer MOBILE model³. For the mobile sector, Wisconsin’s differences also included a larger adjustment for refined speed and fleet composition estimates.

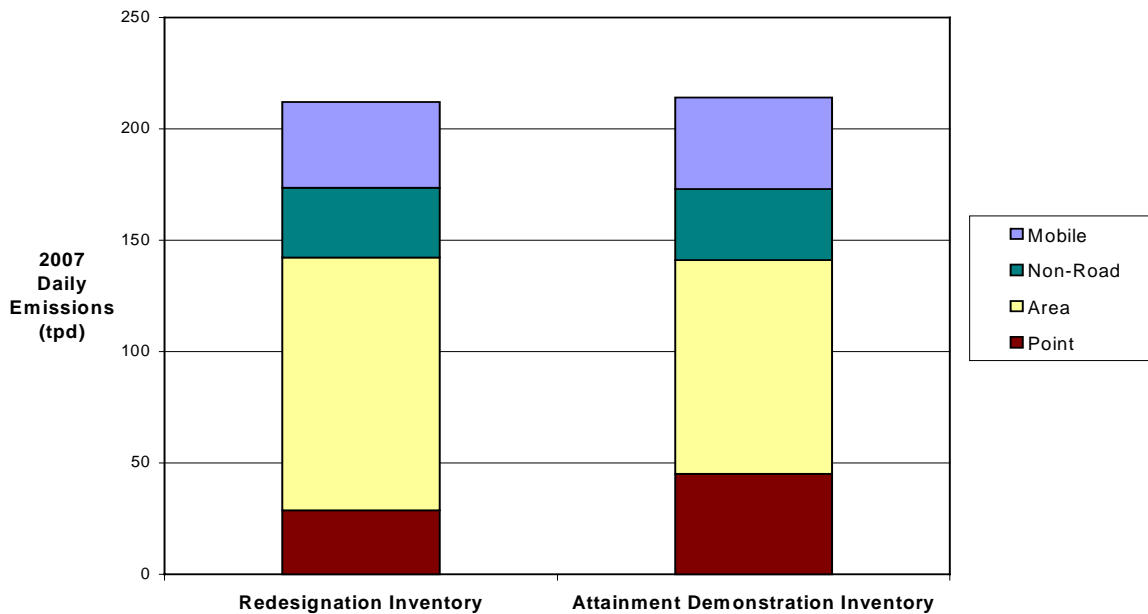
³ Much of this change is accounted for in the projections supporting the air quality modeling pursued for the Attainment Demonstration during 2000 and the projections built into these redesignation/maintenance inventories. MOBILE model changes are not expected to be significant to 1-hour ozone air quality maintenance at this point as the projected changes include lower emission projections for both VOC and NO_x by the end of the maintenance period in 2012.

Figures 5.1a and 5.1b

**Figure 5-1a: Comparison of NO_x Emissions in the 2007 Redesignation Emission Inventory and 2007 Attainment Demonstration Emission Inventory for the 8-Counties
Tons per Ozone Season Day (tpd)**



**Figure 5-1b: Comparison of VOC Emissions in the 2007 Redesignation Emission Inventory and 2007 Attainment Demonstration Emission Inventory for the 8-Counties
Tons per Ozone Season Day (tpd)**



A Continued Ambient Air Quality Management Programs in Wisconsin and the Lake Michigan Region

Section 110 & Part D Air Quality Control Program (Subpart 1 and earlier CAA Sections)

- *Approved WI Monitoring Program & Forward Commitments*
- *Approved WI Construction (New Source) and Operation Permit Programs*
- *Viable WI Inventory Reporting Structure*
- *WI SIP Planning & Development Capability, Rules and Authority*
- *Appropriate Conformity Structures*
- *General Enforcement Authorities*

In general, the state has met all significant planning obligations associated with its Section 110 and Part D obligations under the CAA. At this point in time Wisconsin retains its fully approved and fully delegated air quality management program from the federal government. EPA funds a significant portion of the program and retains annual oversight for the program through a formal Partnership (EnPPA) arrangement.

With partial support from EPA, the Wisconsin DNR Air Quality Management Program maintains a comprehensive ambient air quality monitoring network and AQ reporting program, including adequately placed ozone monitoring sites around the state and a fully enhanced network in the vicinity of the Lake Michigan air shed. Wisconsin maintains a comprehensive point source permitting structure and collects emission fees through an annual point source inventory structure. These are structured in state statute to continue through and past the maintenance period.

Wisconsin's Air Quality Plan Development structure contains adequate state authorities for rule-making and includes an active enforcement/compliance oversight component. The state has developed and applied conformity assessment structures approved by EPA and FWHA for both transportation and general conformity and is structured to continue that effort through the maintenance period.

A Regional Approach to Air Quality Maintenance

- *Overview of Basic Regional Maintenance Perspective – Backstop to 8-Hr efforts*
- *Description of the 2-Page Regional Maintenance Plan Commitment*
- *Regional Maintenance Plan – Summary Table*

Since the inception of the Lake Michigan Ozone Study (LMOS) in 1989 and the formation of the Lake Michigan Air Directors Consortium (LADCO), the states around the Lake have actively pursued regional assessment of their severe ozone problem. From that time, resolution of the ozone violations and ozone formation conditions in the region have been pursued from a common perspective – building the components of attainment for the entire near-lake region.

The regional ozone effort slowly evolved into a Lake Michigan Ozone Control Program (LMOP) that crafted a formal modeling structure to assess various ozone control approaches for reaching attainment within the region. After two prior modeling iterations and extended participation during 1995-97 in the broader area Ozone Transport and Assessment Group, this regional evaluations ultimately resulted in 2000 in the Modeled Attainment Demonstration for the Year 2007. The states of IL, IN and WI used this as the basis for their Ozone Attainment Demonstration SIPs submitted later that year.

The emphasis for regional evaluations shifted during the later 1990s toward the broader attainment issues associated with regional transport along with the recently promulgated 8-hour standard for ozone and the fine particulate matter (PM-2.5) standards. Though an intensive effort focused on finishing the 1-hour attainment demonstrations, it was accomplished in the light of the expected future effort which focused on haze, PM-2.5 and 8-hour ozone. These pollutants form the basis of current effort and a newer organization – the Midwest Regional Planning Organization, a sister to LADCO including more state, tribal and federal land manager participants.

To address a contingent response component for the Maintenance Plan (for the 1-hour ozone standard), the three states determined that ozone emission trend evaluations could best be pursued within the existing regional air quality tracking and evaluation structures. Because of the need to continue attainment progress reductions through 2007, dialogue resulted in agreement over a basic contingent response that looked first at evaluating any violation or near-violation problems on a regional basis. If needed beyond 2007, the recrafted Maintenance Plan for the four northeastern Wisconsin counties also includes listing of potential contingent control measures and some level of commitment to a specified time-frame for determining the need for these further reductions and the speed of their implementation.

The Basic Contingent Approach and Level of Contingent Commitment

The overall approach of the regional maintenance plan is to pursue rapid coordinated evaluation of the best mechanism to ensure maintenance if air monitoring suggests that might not continue based on either emissions increases or monitored AQ trends. Given the reality that progress controls in the region continue through 2007 as part of the approved attainment demonstration, the period before 2007 does not include a commitment for implementation of *additional* control measures for either the four counties or contributing areas beyond the progress components already adopted.

The states in dialogue with EPA determined that three discreet periods exist within the maintenance plan. During the early period, there is a presumption that the region, and specifically the four maintenance areas, may occasionally see residual exceedances of the 1-hour standard...perhaps even reaching a violation (4 exceedances in three years at one site). Therefore, between 2003 and 2004 no real response is expected or committed because major “new” controls still come into effect between 2003 and 2004. By 2005-2007, exceedances should be even rarer given the lower aggregate regional emissions resulting from the NOx SIPs and from new federal on-road vehicle and off-road engine standards. By 2008-2012 the area is projected to meet modeled attainment, all programs are fully implemented and additional exceedances are no longer expected. Hence, the scope and speed of commitment and contingent measure identification becomes much greater the later any elevated ozone problems arise during the maintenance period.

The states used a basic matrix to capture the working regional understanding on a contingent response approach that is portrayed in **Table 5-1 (as amended)**.

Table 5-1 – Amended – October 2002

Proposed Redesignation of 2 Northern Lake Michigan Region 1-Hour Ozone Areas to Attainment (Door Co, WI and Manitowoc Co, WI), and,
Proposed Update of the Sheboygan Co, WI and Kewaunee Co WI Maintenance Plans

REGIONAL CONTINGENCY APPROACH MAINTENANCE PLAN

4 NORTHEASTERN WI COUNTIES

Yr	Contingency Measure Trigger	Action to be Taken	Measures Currently Scheduled for Implementation During this Timeframe
2003 - 2004	Exceedance or violation occurs anywhere within the 2001 Lake Michigan region nonattainment area boundary.	IL, IN and WI shall continue to implement their Attainment Demonstration and Rate of Progress Plans.	<ul style="list-style-type: none"> • NOx SIP Call (IL & IN) • Federal Nonroad Engine Standards • BP Amoco Agreed Order (IN) • WI NOx-specific measures
2005 - 2007	<p>Level 1 Trigger</p> <ul style="list-style-type: none"> • Monitored ambient levels of ozone exceeding 124 ppb more than once per year at any monitoring station in the 4 Northeastern WI maintenance areas, or more than two exceedances in any two or three year period. 	<p>IL, IN and WI shall continue to implement their Attainment Demonstration and Rate of Progress Plans. WI will work cooperatively with LADCO, IL, and IN on a study to ensure that scheduled federal and state control measures will reduce regional emissions of Nox and VOCs through the 2012 maintenance year. The study shall be conducted within 9 months.</p> <p>If it is determined that scheduled emission decreases are not sufficient for maintenance of the standard, WI will work cooperatively with IL and IN to revise it's maintenance plans, and to assess the upwind SIPs for appropriate adjustment, within 24 months.</p>	<ul style="list-style-type: none"> • Tier 2 Vehicle Standards and Low Sulfur Fuel • Heavy Duty Diesel Standards and Low Sulfur Diesel Fuel • NOx SIP Call Phase II (IN & IL only) • VOL Storage RACT (IN) • Continued WI-specific NOx measures

Continued on next page.

Year	Contingency Measure Trigger	Action to be Taken	Potential Contingency Measures ²
2008 – 2012	<p>Level 1 Trigger</p> <ul style="list-style-type: none"> Monitored ambient levels of ozone exceeding 124 ppb more than once per year at any monitoring station in the 4 Northeastern WI maintenance areas, or more than two exceedances in any two or three year period. The Lake Michigan Nonattainment Area's NOx or VOC emissions inventories for 2005 or 2008 increase more than 5% above the levels included in the 1999 emissions inventories. 	<p>WI will work cooperatively with LADCO, IL and IN to assess the exceedance or determine if emissions trends are likely to continue. If so, WI will evaluate cooperatively within LADCO to determine what and where controls may be required as well as level of emissions reductions needed, to avoid a violation of the standard. The study shall be completed within 9 months.</p> <p>If deemed necessary to re-enable or to ensure continued attainment level air quality in the 4 maintenance areas based on the evaluation, WI will adopt appropriate control measures within 18 months of that determination and will seek appropriate upwind controls based on the cooperative assessment</p>	<p>Point Source Measures</p> <ul style="list-style-type: none"> Reinstate requirements for Offsets and/or LAER Apply RACT to smaller existing sources Tighten RACT for existing sources covered by US EPA CTGs. Expanded geographic coverage of current point source measures NOx controls Other measures to be identified <p>Mobile Source Measures</p> <ul style="list-style-type: none"> TCMs, including, but not limited to, area-wide rideshare programs, telecommuting, transit improvements, and traffic flow improvements. High-enhanced I/M (OBDII) California Engine Standards Other measures to be identified <p>Area Source Measures</p> <ul style="list-style-type: none"> California AIM California Commercial and Consumer Products Broader geographic applicability of existing measures California Off-road Engine Standards Other measures to be identified
	<p>Level 2 Trigger</p> <ul style="list-style-type: none"> A violation of the standard¹ at any monitoring location in the 4 northeastern WI maintenance areas 	<p>In cooperation through LADCO, WI will work with IL and IN to conduct a thorough analysis to determine appropriate measures to address the cause of the violation. WI commits to complete an analysis within 6 months. WI will adopt selected measures within 18 months and implement them as expeditiously as practicable, taking into consideration the ease of implementation and the technical and economic feasibility of selected measures as well as their appropriateness to address the monitored violations. Based on the analysis, WI will also seek appropriate additional regional upwind emission reductions of either VOC or NOx on an expeditious schedule as needed to ensure attainment in the four counties.</p>	

¹ The occurrence of a Level 2 trigger, or violation of the standard, will be determined at the end of the ozone season after the monitoring data have been quality assured.

² Because it is not possible for the LADCO states to determine what control measure(s) will be adequate at an unspecified time in the future, the contingency measures listed above is a sample of available possible measures. The feasibility assessment and selection of potential measures will be based upon cost-effectiveness, emission reduction potential, economic and social considerations or other factors that IL, IN, WI and public stakeholders deem appropriate.

ELEMENTS TO BE INCLUDED IN REGIONAL ANALYSIS

In the event of an exceedance within the four Northeastern WI Maintenance Areas, Wisconsin, in cooperation with LADCO, IL and IN will conduct an analysis that examines:

- the number, location and severity of the exceedance
- the weather patterns contributing to the exceedance
- potential source emissions contributing to the exceedance
- the geographic application of possible contingency measures
- emissions trends analysis
- current and/or newly identified emission control technologies
- influences outside of the maintenance area
- cost effectiveness, feasibility and timing of implementing identified potential contingency measures and/or newly identified contingency measures.

ANALYSIS PROCESS:

1. **Regional Boundary.** The counties referred to as the four Northeastern WI maintenance areas consist of the Sheboygan, Manitowoc, Kewaunee and Door counties.
2. **Regionality.** In the event of increased emissions or monitored ozone levels anywhere within the maintenance areas associated with the Lake Michigan region of IL, IN and WI, a regional analysis will be conducted. A regional process would be developed and WI would seek a regional agreement to the process by IL and IN for elements that go beyond the general commitment.
3. **Public Participation.** Public involvement process in evaluations and selecting additional measures to be conducted by and within each of the LADCO states.

Listing of the Lake Michigan Region 1-Hour Ozone Areas – (includes Nonattainment, Maintenance and Proposed Maintenance Areas)

Illinois Counties	Indiana Counties	Wisconsin Counties
Cook Du Page Grundy (Aux Sable and Goose Lake townships) Kane Kendall (Oswego Township) Lake McHenry Will	Lake Porter	Door ³ Kenosha Kewaunee ³ Manitowoc ³ Milwaukee Ozaukee Racine Sheboygan ³ Walworth Washington Waukesha

³ 1-Hour Ozone Maintenance Areas addressed by this Plan.

D – Discussion of the Potential Contingent Emission Control Measures

- *Summary Description - Contingent Measures*
- *Criteria likely to influence contingent measure priority/selection*
- *Public involvement in the contingent measure selection process (see Chp 7)*

The regional dialogue on a proposed contingent response process (before the severe areas fell back into violation status) included discussion of measures that all three states felt could result in incremental added emission reductions to address a demonstrated maintenance need. The states felt that commitment to a single measure or a small set of measures early in the maintenance period was inappropriate.

The most optimum contingent controls strategy will depend on future ozone conditions regarding air chemistry, regional economics and the demonstrated effectiveness of control technologies still coming into effect in the region. In addition, future evaluations may point toward a focus on either VOC or NO_x control, and may indicate the benefit of a more intensive local approach or, more likely, a broader regional effort to address peak ambient ozone. Finally, any contingent measure will come into existence in the light of SIPs formulated by the three states to address 8-hour ozone, PM-2.5 and regional haze. In all likelihood, any contingent control requirement triggered by violation of the 1-hour standard within the Lake Michigan region (and more specifically within the four maintenance areas) will already be proposed for inclusion within the 8-hour ozone SIPs. These are expected to be due by 2007 or 2008 pending any litigation of a final federal implementation guidance rule.

Regional Contingent Measures - 2003 through 2004

During this early period there are no added contingency measures. There will be significant, ongoing emission reductions in the Lake Michigan nonattainment areas and in areas upwind of the nonattainment areas over the period. These measures include the NO_x SIPs, Federal Motor Vehicle Regulations, Indiana's Refinery Agreement with BP, and the Wisconsin NO_x reductions from the Wisconsin Attainment SIP.

The emission reductions from these measures were included in the Attainment SIPs submitted by Wisconsin and the Attainment SIPs and NO_x SIPs submitted by the other Lake Michigan States.

Regional Contingent Measures - 2005 through 2007

Several discrete emission reduction measures are in place that will continue to contribute to emission reductions that affect ozone formation in the nonattainment areas. These already adopted or strongly committed measures include:

POINT

- Enhanced VOC (VOL) storage RACT in Indiana.
- NO_x SIP call – Phase 2 Final Reductions (IL and IN)

MOBILE

- Federal Tier 2 Motor Vehicle Standards and Low Sulfur Gasoline
- Heavy Duty Diesel Standard and Low Sulfur Diesel Fuel

- Continued NOx I/M

AREA/NONROAD

- Federal Tier 2 and 3 Engine Standards

The emission reductions from these measures were included in the Attainment SIPs submitted by Wisconsin and the Attainment SIPs and NOx SIPs submitted by the other Lake Michigan States.

Regional Contingent Measures - 2008 through 2012

Wisconsin (along with the other Lake Michigan States in the earlier draft proposals), has identified the following emission reduction programs for consideration as contingency measures should they be needed to continue to maintain the 1-hour NAAQS for ozone. The list is specifically nonexhaustive. Adoption of any contingency measure would be done after a determination of need and a thorough analysis of the emission reduction potential of measures and an assessment of their efficacy in the later years of the maintenance plan. Past evaluations of emission control measures have examined potential emission reductions, cost effectiveness, timeliness of emission controls, and public acceptability.

Rule making typically takes one year for rule development and promulgation. Another year is typically allowed for affected sources to come into compliance. For some measures, turnover of existing emissions sources (vehicles or engines) may require many years to observe final emission reduction potential.

The regional contingent response for the level 2 (violation) trigger commits Wisconsin to adoption of one or more contingent measures within 18 months of determining the most appropriate emission reduction approach to regain attainment air quality. The evaluation to support that determination would be completed within 6 months of the close of an ozone season containing a quality-assured monitored violation. The state commits to as short an implementation time-frame as would be appropriate based on the type of control adopted. As noted for Wisconsin, this is usually a one year period. A presumption within this commitment is that the state will evaluate the most appropriate geographic scope for any further controls including upwind areas in Wisconsin, Illinois and Indiana and will seek adoption on an expeditious basis.

Potential regionally identified (and state-identified) contingency measures include:

POINT

- **Reinstate Offsets and/or LAER requirements for new source review for VOC sources.**

LAER emission control technology, combined with permanent VOC offsets, contributed to the significant reduction in VOC emissions from point sources in Wisconsin. Point sources are expected to grow at a higher rate without offsets and with BACT technology instead of LAER. Requiring offsets and LAER has the potential to reduce VOC emission growth. Some VOC emission reduction from this program is likely. A one year rule drafting and promulgation is required. While the difference between a BACT and LAER level of review might take some years to show significant effect, the application of emission offset requirements achieves significant emission control from new major source installation.

- **RACT on smaller VOC sources.**

RACT emission control technology is currently applied only to major sources. For many RACT categories, there are few potential emission reductions to be achieved by lowering the threshold for applicability. For some specific RACT categories there are many small sources and the aggregate emission reduction potential may be large enough to warrant rule revisions. Some VOC emission reductions from this program are likely. A one-year rule drafting and promulgation process is required for each source category that is changed. Another year would be expected for sources to comply with tighter emission limits.

- **Tighten existing VOC RACT limits.**

Many RACT rules are more than 10 years old. A thorough analysis of the existing rules is likely to reveal cost effective emission reductions. Significant VOC emission reductions are possible and likely. This would require a one-year rule drafting and promulgation process for each source category that is changed. Another year would be expected for sources to comply with tighter emission limits.

- **Expanded geography for existing RACT controls.**

Most of the Wisconsin RACT rules, especially those adopted after 1992, cover the nonattainment counties designated after the passage of the CAA-90. Expanding the coverage of these rules to a broader geographic coverage would reduce VOC emissions that likely contribute in part to elevated ozone levels in the nonattainment counties. A thorough analysis of the emission reduction potential and a rigorous photochemical modeling analysis to determine ozone-forming culpability would need to be completed. Significant VOC emission reductions from the program are likely. This would require a one-year rule drafting and promulgation process for each source category that is changed. Another year would be expected for sources to comply with tighter emission limits.

- **Other measures to be identified.**

Given the long lead-time between redesignation and possible implementation of contingency measures, the Department recognizes the need to search for other potential contingency measures as part of any needed future analysis.

MOBILE

- **High-Enhanced Inspection and Maintenance.**

Wisconsin's motor vehicle inspection and maintenance program meets the EPA requirements for low enhanced I/M programs. Additional emission reductions could be achieved by increasing the frequency of testing, by tightening cut points for some or all pollutants, or by other administrative changes. In the later years of the maintenance plan, other inspection and maintenance alternatives may exist that could be used to achieve additional emission reductions. Both VOC and NO_x emission reductions are likely from this program. A one-year rule drafting and promulgation process would be needed. It would likely take one or two years for all vehicles to be tested with tighter emission cutpoints.

- **California motor vehicle emissions standards.**

California is expected to adopt stricter emission limits beyond the California Tier 2 standards. To achieve the full emissions benefits of future California motor vehicle standards, states adopting those standards may need to adopt California fuel standards as well. Motor vehicle emission standards achieve emission reductions over time as the fleet turns over. A new fuel standard may achieve emission reductions immediately if the new fuel has a positive effect on emission reduction equipment in the existing fleet. The CAA-90 requires a two-year notification prior to adoption of California motor vehicle standards. Significant VOC and NO_x emission reductions are likely from the program. A one-year rule drafting and promulgation process would be necessary. A two-year notification process is

required in the CAA-90. It takes several years until significant fleet turnover begins to yield full emission reduction benefits. Statutory changes may be required to permit other state agencies to enforce the program through registration denial.

- **Transportation Control Measures/Transportation Demand Management (TCM/TDM).**

The Department is now conducting a multiple agency review of TCM/TDM programs that have the potential to achieve multiple environmental benefits, including reduced emissions that contribute to ozone formation. The Department will use this review and other pertinent information as part of an analysis of TCM/TDM programs. Both VOC and NO_x emission reductions are likely. A one-year rule drafting and promulgation process. Some TCMs may require several years before full emission reduction potential is achieved.

- **Other measures to be identified.**

Given the long lead-time between redesignation and possible implementation of contingency measures, the Department recognizes the need to search for other potential contingency measures as part of any needed future analysis.

NONROAD

- **California nonroad engine and/or nonroad vehicle standards.**

California has specific authority to establish emission standards for nonroad engines and nonroad vehicles. Other states may adopt these standards provided they give a two-year notice of adoption. Future California standards may require adopting a California nonroad fuel standard to achieve full emission reduction benefits. Very significant VOC and NO_x emission reductions are likely from this program. A one-year rule drafting and promulgation process would be needed. A two-year notification process is required in the CAA-90. It takes several years until significant fleet turnover begins to yield full emission reduction benefits.

- **Other measures to be identified.**

Given the long lead-time between redesignation and possible implementation of contingency measures, the Department recognizes the need to search for other potential contingency measures as part of any needed future analysis.

AREA

- **California AIM Coating standards**

California has much lower VOC limits on paints and other coatings than most other states' RACT requirements or the Federal AIM Rule. Significant VOC emission reductions are likely from this program. A one-year rule drafting and promulgation process would be needed for each source category that is changed. Another year would be needed for manufacturers, distributors and other suppliers to provide products with tighter emission limits.

- **California Commercial and Consumer Products solvent limits.**

California has much lower VOC limits on consumer and commercial products than most other states' RACT requirements of the Federal Control Technique Guidelines CTGs for these categories. Significant VOC emission reductions are likely from this program. A one-year rule drafting and promulgation process would be required for each source category that is changed. Another year would be needed for manufacturers, distributors and other suppliers to provide products with tighter emission limits.

- **Expanded geography for existing area source VOC controls.**

Most of the Wisconsin area source VOC rules, such as Stage 2 vapor recovery, only cover the nonattainment counties designated after the passage of the CAA-90. Expanding the coverage of these rules to a broader geographic coverage would reduce VOC emissions that likely contribute in part to elevated ozone levels in the nonattainment counties. A thorough analysis of the emission reduction potential and a rigorous photochemical modeling analysis to determine ozone-forming culpability would need to be completed. Significant VOC emission reductions from the program are likely. This would require a one-year rule drafting and promulgation process for each source category that is changed. Another year would be expected for sources to comply with tighter emission limits.

- **Other measures to be identified.**

Given the long lead-time between redesignation and possible implementation of contingency measures, the Department recognizes the need to search for other potential contingency measures as part of any needed future analysis.

Likely Criteria for Contingent Measure Selection

As described in the following Public Outreach section (*Chapter 7*), Wisconsin pursues a focused stakeholder outreach process during the development of major Ozone Plan revisions and new control program development. This maintenance plan encompasses a commitment to pursue additional controls upon either a “new” violation of the 1-hour standard post-2007 or if indicated necessary to ensure maintenance in the future for the four areas covered

Because of the uncertainty of where, when and how extensive new controls would be required, it is not possible to fully outline in advance the evaluation process for control selection. However, some core air quality management criteria will certainly guide any necessary selection.

Control measures are typically evaluated and compared using criteria such as cost-of-control, potential control impact, control impact cost-effectiveness, speed of impacts, sensitivity to other public policy efforts and initiatives, inter-sector equity (mobile sector Vs industry Vs general/commercial population) and any potential co-benefits or counter-benefits.

Wisconsin in its commitment to pursue contingent measures has identified those for which core authorities already exist and which could be adopted through a time-limited regulatory process. Part of that process includes the identification of fiscal impacts, regulated party impacts and expected emission reduction benefit.